

Project Title: Unmanned Aerial System  
 Project Type: New  
 Applicant Jurisdiction(s): Montgomery County, First Responder-Low Enforcement  
 Applicant Organization: MCSO  
 Point of Contact: D. Hess  
 Point of Contact Phone: 936-538-8288  
 Point of Contact Email: darren.hess@mctx.org

Which UASI goal(s) will the project address? (see strategy) Enhance Regional Response Capacity  
 Which National Priorities will the project address? (up to 4) Strengthen CBRNE Detection, Response Decon (select one)  
 Geographic scope of project Regional (effecting all five UASI counties) (select one)

**PROJECT DESCRIPTION** (Provide sufficient detail to explain the proposed project, area to be served, etc.)

This vehicle will be used to provide aerial surveillance at any critical incident involving a public safety response. Examples include, aerial viewing of evacuation routes, structural collapses, train derailments, building/wildfires, hazardous materials spills, and SWAT rescues. The video is extremely clear and using the helicopter as the aerial platform, allows for extreme maneuverability and controllability. An example of such control is demonstrated through the ability of the drone to "view" inside a second story window to stream live video during a SWAT rescue.

The unmanned aerial vehicle (UAV) will be utilized to support public safety efforts in Montgomery County and the region. This helicopter drone has the capability of real time reconnaissance through both infra-red and color video. The UAV has the capability of launching within a short period of time and remaining on scene for over an hour. It can be landed virtually anywhere and refueled within fifteen minutes, allowing for a short lapse in video feed during the incident. The helicopter drone encompasses a jet turbine engine capable of flying at high altitudes and quickly covering distances. Since this is an unmanned vehicle, there is no risk to the "flight operator" and it does not require expensive licensing (pilot, etc.)

**PURPOSE & BENEFITS** (Explain how the project will benefit the region and the problem/needs/gaps it will address.)

The UAV provides the region with a tool not currently available. It will provide public safety personnel with the capacity to perform precise, repetitive scans of a region hour after hour, day after day, night after night in complete darkness, in dangerous weather conditions under complete computer control. It will allow agencies to perform visual or thermal imaging of an incident, to provide search operations, to monitor a hazardous materials operation or Low Enforcement response without further endangering our emergency responders. The unit and operator will respond to any requesting agency within the region, and after arrival will be airborne within 15 minutes & provide 'live' video feeds to the ICP/EOC. In addition it will give our region the capability to visualize our communities for damage assessment post natural disaster or man-made disaster with the threat of WMD. The investment will fill gaps outlined in strategy planning; Emergency Public Safety & Security, Search & Rescue, WMD/HazMat response, Firefighting operations & support.

**PROJECT MANAGEMENT** (Who will manage the project?)

Project management team would consist of members from the Montgomery County OEM, who would provide oversight on the project in terms of grant administration and compliance with allowable equipment purchases. Further management and subject matter expertise would be provided by members of the Montgomery County Sheriff's Special Operation Group, and command staff.

**PROJECT MILESTONES** (Provide a begin date, and end date and the steps to be undertaken in this period)

| BEGIN   | END      | DESCRIPTION/IMPLEMENTATION STEPS   |
|---------|----------|--|
| 12/1/10 | 6/1/11   | Equipment Spec's are finalized, released for bid process. Bids received & awarded.                           |
| 6/1/11  | 11/30/11 | Equipment ordered, received, inventoried & testing commence's. All testing completed and acceptance awarded. |
| 12/1/11 |          | Region notified of unit availability.  |



UAS QUOTE

**Vanguard Defense Industries, LLC**  
*"Providing Intelligence and Vision"*

206A South 336 Loop West, Conroe, Tx 77304  
 Phone 832-403-5845 Fax 936-539-6551  
 info@vdicorporation.com

RFP # 10-014  
 DATE: DECEMBER 10, ~~2010~~  
 2009

TO Chief Deputy Randy McDaniel  
 Montgomery County Sheriff's Office  
 #1 Crimnal Justice Drive  
 Conroe, Texas 77301  
 (936) 760-5871  
 Customer ID LE 09-001

JOB MK-III Shadow Hawk Unit (complete  
 turnkey system)

| QUANTITY | DESCRIPTION  | UNIT PRICE | LINE TOTAL |
|----------|--|------------|------------|
| (1 Unit) | MK-III SHADOWHAWK® Unmanned Aerial Systems (UAS); Upgrades: JetCat P200 Turbine, 850 mm Carbon Fiber RotorTech Main blades, 120mm RotorTech carbon Fiber tail blades, Kevlar Fuel tank + Extended Range Fuel Tanks, 30 mm Aircraft aluminum tail boom.   | \$220,000  | \$220,000  |
|          | ** Included Equipment;   | (Standard) | \$0.00     |
|          | Ground Control Station - Fully integrated wireless link to Piccolo LT avionics unit, manual pilot console, supplying differential GPS corrections to the avionics, and serving as a bridge to the operator interface. Includes Laptop and flight controls.   |            |            |
|          | Optics - Sony FCB EX980 with 26X optical zoom, FLIR Photon 320 with 324 x 256 image resolution. Both units housed in Carbon Fiber Gimbal.  | (Upgrade)  | \$35,000   |
|          | Avionics - Full feature Piccolo LT Autopilot system; Includes take-off and landing, precision hover, and automated path following along with autopilot assisted manual steering modes. Includes Hz GPS, and integrated radio link. System includes 3D mapping software, programmable waypoint flight management system and full integration. | (Upgrade)  | \$18,500   |

## SAFETY RISK ANALYSIS PLAN

Safety is the FAA's number one priority for the integration of unmanned aircraft systems (UAS) operations in National Airspace. In order to ensure every operational risk has been carefully examined and appropriate mitigations have been instituted, each law enforcement agency applying to the FAA for authorization to fly small UAS shall submit a Safety Risk Analysis Plan (SRAP) for the agency's jurisdiction.

The SRAP shall:

- 1) Identify the proposed operating area on a VFR sectional/aeronautical chart and include sufficient map area to encompass the agency's total jurisdiction.
- 2) Identify the approximate boundaries of the agency's jurisdiction and enter GPS coordinates plus radius in the FAA online-application.
- 3) Identify sensitive infrastructure and other areas within the jurisdiction over which the risks of flight may impact persons and property on the ground within the agency's jurisdiction. Agencies should use the Safety Risk Checklist, identifying any additional safety risks specific or unique to their jurisdiction.
- 4) Indicate those appropriate risk mitigations or controls for each safety risk identified.
- 5) The Safety Risk Analysis Plan should be reviewed and updated by the agency at least annually and more often if additional safety risks are identified.

Please note: The Safety Risk Analysis Plan is not a substitute for the sUAS Pilot-in-Command's responsibility to check for Temporary Flight Restrictions (TFR's), Notices to Airmen (NoTAM's), and local weather conditions prior to each flight.

|                             | Flight Safety Risks  | Location(s) | Mitigation/Control |
|-----------------------------|--|-------------|--------------------|
| <input type="checkbox"/> A. | Special Use Airspace within the agency's jurisdiction? <sup>1,2,3</sup>      |             |                    |
|                             | Prohibited-Restricted-Alert Areas  |             |                    |
|                             | Military Operations Areas (MOA's)  |             |                    |
|                             | Parachute Jump Areas   |             |                    |
|                             | Intensive Student Flight Training Areas                                      |             |                    |
| <input type="checkbox"/> B. | Class B, C, or D Airspace within the agency's jurisdiction? <sup>1,2,3</sup> |             |                    |
|                             | Class B  |             | NA                 |
|                             | Class C  |             |                    |
|                             | Class D  |             |                    |
| <input type="checkbox"/> C. | Airport facilities? <sup>4</sup>   |             |                    |
|                             | Public Airports  |             |                    |
|                             | Private Airports   |             |                    |
|                             | Heliports  |             |                    |
|                             | Gliderports  |             |                    |
|                             | Weather or air balloon launch sites <sup>5</sup>                             |             |                    |